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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/058,523

01/28/2002

Franz Winter

SBV-09918

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04/11/2003

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EXAMINER

SAINT SURIN, JACQUES M

ART UNIT

PAPER NUMBER

2856

5

DATE MAILED: 04/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

9m

Office Action Summary

Application No.

10/058,523

Applicant(s)

WINTER, FRANZ

Examiner

Jacques M Saint-Surin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Staff (US Patent 4,194,400).

Regarding claims 1 and 6, Staff ('400) discloses a method for measuring gaps and hollow spaces in motor vehicle body construction, the method which comprises:

introducing a filler element into one of a gap and a hollow space (operating head 32, shown in more detail in FIG. 2, carries a transducer having a transducer face 36 through which is provided an opening 38 for the disposition of a liquid couplant such as water, glycerine or a light oil, see: col. 46-50).

and measuring the one of the gap and the hollow space by using an ultrasonic testing unit coupled to the filler element (ultrasonic probe shown generally at 28 includes a probe body 30 and an operating head 32 connected to the probe body through a mechanical coupling 34 shown in FIG. 1 to be a typical universal joint

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wherein such coupling or joint allows multidimensional movement of the operating head with respect to the body. Furthermore, Yamaguchi discloses ultrasonic examination for defects in a portion of a member not directly accessible to straight line ultrasonic vibration signal includes providing a predetermined normal signal form associated with the member portion to be examined. Then an ultrasonic signal is directed within the member toward at least one boundary of the member from which it is deflected toward the member portion, see: col. 2, lines 1-3, see: also, col. 3, lines 20-34).

Regarding claim 2, Staff discloses an ultrasonic probe shown generally at 28 includes a probe body 30 and an operating head 32 connected to the probe body through a mechanical coupling 34 shown in FIG. 1 to be a typical universal joint, see: col. 3, lines 40-44.

Regarding claim 3, Staff discloses an ultrasonic examination designated as ultrasonic probe 28, see: Fig. 1

Regarding claim 4, Staff discloses the transducer, represented by transducer face 36, is electrically connected through conductor 44 to a means for the generation, transmission and evaluation of ultrasonic signals, presented in FIG. 1 as instrument 46, for example including an oscilloscope 48 for the visual presentation of the form of reflected ultrasonic signals, see: col. 3, lines 54-59.

Regarding claims 7-10, Staff discloses opening 38 is connected to flexible conduit or tubing 40 in FIG. 1 through which liquid couplant is passed, for example as a result of the operation of a syringe 42 or other pumping means, see: col. 3, lines 50-53

Regarding claims 11-12, Staff discloses operating head 32, shown in more detail in FIG. 2, carries a transducer having a transducer face 36 through which is provided an opening 38 for the disposition of a liquid couplant such as water, glycerine or a light oil. Furthermore, opening 38 is connected to flexible conduit or tubing 40 in FIG. 1 through which liquid couplant is passed, for example as a result of the operation of a syringe 42 or other pumping means, see: col. 3, lines 46-50.

3. Claims 1-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamaguchi et al. (US Patent 6,397,656).

Regarding claim 1, Yamaguchi et al. ('656) discloses a method for measuring gaps and hollow spaces in motor vehicle body construction (Fig. 1 is a block diagram of an object detecting system using an ultrasonic sensor, see: col. 4, lines 4-6), the method which comprises: introducing a filler element (filler 44, see: Fig. 7 and col. 10, line 66 and col. 11, lines 1-2 teaches the filler is uniformly and closely distributed on contact surfaces 30 on both sides) into one of a gap and a hollow space ; and measuring (detector 2, see: Fig. 7) the one of the gap and the hollow space by using an ultrasonic testing unit (detector case 32) coupled to the filler element (44).

Regarding claim 6, it is a device which performs the functions of the steps recited in the method claim 1, Therefore, it is rejected for the reasons set forth for claim 1.

Regarding claim 2, Yamaguchi ('656) discloses on the upper end surface of the detector case 32A, a packing 33A of an elastomer is integrally formed by a double molding and on the contact surface 30, a filler 44 is uniformly and closely provided, see: col. 11, lines 60-63. Furthermore, Yamaguchi discloses the distributed state of

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the filler can be better to improve the precise of the ultrasonic sensor if the detector is fixed so that the upper end face of the detector faces the outside face of the detector case, to inject a filler (a fixing filler) containing an epoxy resin or the like as a main component onto the upper end face of the detector to solidify the filler to sufficiently polish the surface of the fixing filler to inject the grease-like filler.

Regarding claim 3, Yamaguchi et al. discloses detecting a resonance frequency between a system comprising said detector and said outside face of said vessel on the basis of an analysis of the inputted emission waveform or reflected waveform, see: col. 16, lines 17-19.

Regarding claim 4, Yamaguchi discloses a signal from the CPU 7 including the detection operation control circuit 8 having the operating frequency setting means 9 is outputted to the variable oscillator circuit 11, see: col. 8, lines 11-15 and the detection operation control circuit 8 outputs an ultrasonic wave emitting command to the variable oscillator circuit 11 so that an ultrasonic wave having the registered operating frequency is emitted from the detector 2, see: col. 7, lines 55-58.

Regarding claim 5, Yamaguchi discloses as can be clearly seen from the comparison of FIG. 4 with FIG. 4B, the attenuated degree of the waveform during resonance is small, whereas the attenuated degree of the waveform during non-resonance is great and therefore, by utilizing the difference in attenuated degree of the waveform, it is possible to find a resonance frequency according to the wall thickness and material of the LPG tank 3, see: col. 7, lines 26-32.

Regarding claims 7-10, Yamaguchi discloses the packing 33 is made

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of a soft resin, such as an elastomer, and can be easily deformed in accordance with the shape of the outside bottom face of the tank 3 having the curved surface, see: col. 11 lines 7-10.

Regarding claims 11 -12 Yamaguchi discloses between the tank 3 and the detector case 32, a filler 44 having the same ultrasonic transmitting characteristic as that of the liquid 4 is provided and the filler 44 is uniformly and closely distributed on contact surfaces 30 on both sides, see: col. 11, lines 10-65-67 and col. 11, lines 1-2. Furthermore, Yamaguchi discloses material may be selected from resin materials, such as plastics, in addition to metals.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

White et al. (US Patent 5,732,706) discloses ultrasonic array with attenuating electrical interconnects.

Araki et al. (US Patent 4,014,211) discloses ultrasonic flow meter.

Huang et al. (US Patent 5,907,099) discloses ultrasonic device with enhanced acoustic properties for measuring a volume amount of fluid.


Proctor, Jr. (US Patent 4,782,701) discloses transducer for measuring transient tangential motion.

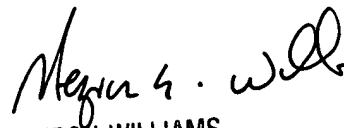
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacques M Saint-Surin whose telephone number is (703) 308-3698. The examiner can normally be reached on Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.


Jacques M. Saint-Surin
April 5, 2003


HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800